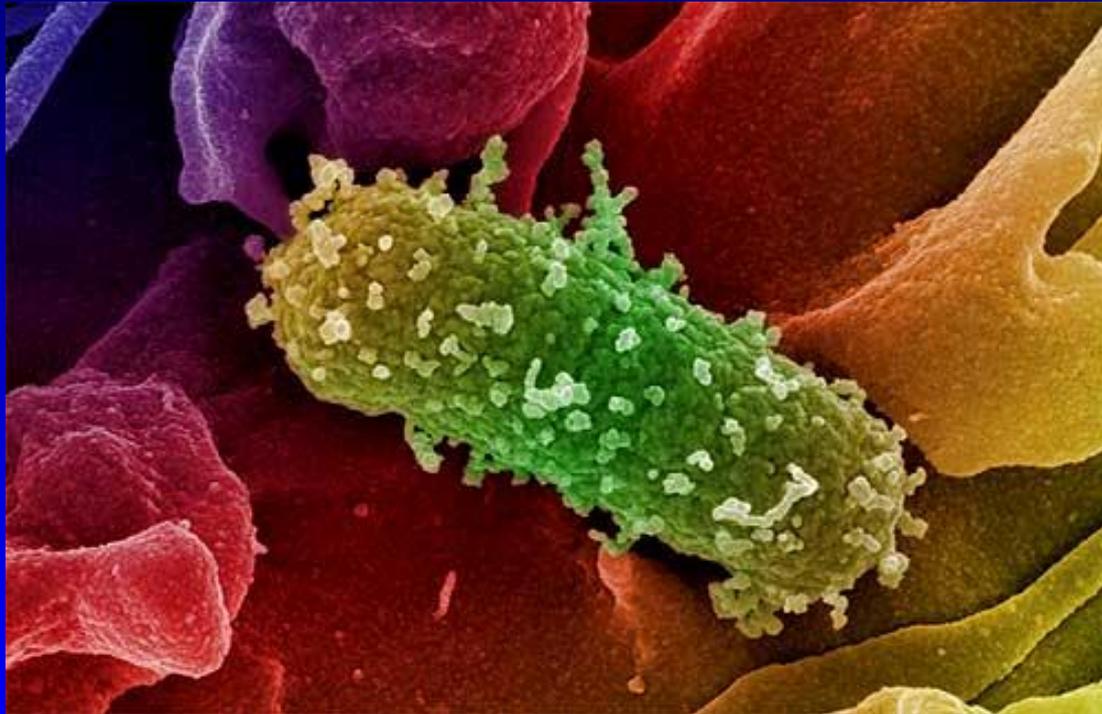


USEPA 2012 Recreational Criteria for primary contact recreation to prevent gastrointestinal illnesses



Utah Water Quality Standards Workgroup
December 10, 2012
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Presentation Overview

- ❖ EPA 2012 criteria recommendations
- ❖ Utah Criteria
- ❖ Implications for Utah
- ❖ Discussion



2012 EPA Recreational Criteria

- ❖ Update of 1986 Criteria
- ❖ 2011 Draft
 - Over 9,000 comments received
 - Court-ordered deadline for EPA
- ❖ 2012 Issued Final November, 2012



2012 EPA Recreational Criteria

- ❖ New data: National Epidemiological and Environmental Assessment of Recreational Water (NEEAR) studies
 - **9 Coastal Beaches impacted by sewage**
 - **AWCA questioned application to inland waters**



USEPA 2012 Criteria

State's may adopt either criteria

| Criteria Elements | Estimated Illness Rate (NGI): 36 per 1,000 primary contact recreators | | OR | Estimated Illness Rate (NGI): 32 per 1,000 primary contact recreators | |
|---|---|----------------------------------|----|---|----------------------------------|
| | Magnitude | | | Magnitude | |
| Indicator | GM (cfu/100 mL) ^a | STV (cfu/100 mL) ^a | | GM (cfu/100 mL) ^a | STV (cfu/100 mL) ^a |
| Enterococci – marine and fresh | 35 | 130 | | 30 | 110 |
| OR | | | | | |
| <i>E. coli</i> – fresh | 126 | 410 | | 100 | 320 |
| <p>Duration and Frequency: The waterbody GM should not be greater than the selected GM magnitude in any 30-day interval. There should not be greater than a ten percent excursion frequency of the selected STV magnitude in the same 30-day interval.</p> | | | | | |



2012 EPA Recreational Criteria beach advisories

- ❖ Beach action values (75th percentile)
- ❖ Can be used to issue advisories/closures but is not criteria



USEPA 2012 compared to DWQ 2012

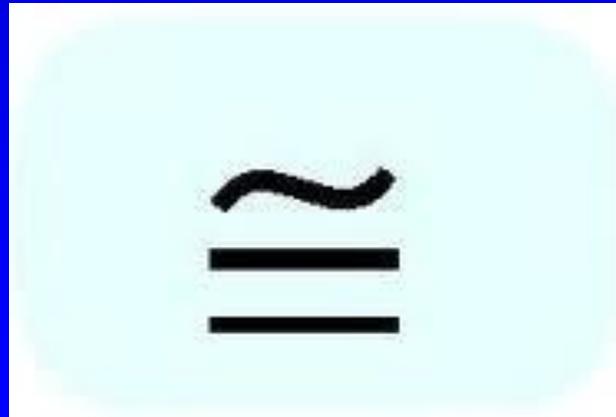
DWQ's criteria revised in 2008

USEPA, 2012

- ❖ GM = 126 cfu/100 ml 30-day interval
- ❖ STV (90th percentile) = 410 cfu/100 ml < 10% 30-day interval

DWQ R317-2-14

- ❖ GM = 126/100 ml 30-day average
 - Assessment methods: MPN of 5 samples
- ❖ Max = 409/100 ml <10% of samples



EPA 2012 Recreational Criteria applicability

“EPA’s 2012 RWQC are for all waters in the United States including marine, estuarine, Great Lakes, and inland waters that are designated for primary contact recreation.” (EPA, 2012)

EPA comment response: The final RWQC does not change the definition of primary contact recreation, does not provide criteria recommendations for secondary contact recreational uses, and does not define secondary contact



2012 EPA Recreational Criteria combined sewer overflows

- ❖ Criteria based on data collected from waters likely impacted by a mixture of WWTP effluent and other human sources.
- ❖ Raw sewage has a higher ratio of E coli to pathogens than effluent.
- ❖ Criteria provides the most conservative level of protection and adequately accounts for situations where raw sewage is the source.



2012 EPA Recreational Criteria sampling frequency

❖ AWCA Comments

- Waters marginal for primary contact recreation probably sampled less
- Incorrect impairment decision results in resources being devoted to chasing incorrect decisions marginal waters

- ❖ EPA Response: Monitoring and sampling strategies are not included in the final RWQC. However, EPA recommends at least weekly sampling. Since the final RWQC are intended to apply to all primary contact recreation waters, this recommendation would apply to all such waters, not just designated bathing beaches.



2012 EPA Recreational Criteria sampling frequency

- ❖ Recommends each sample be treated independently for 30-day geometric mean. Multiple samples from a day should be treated as independent samples.
- ❖ Future Implementation Guidance and qPCMR



201 EPA Recreational Criteria site-specific criteria

- ❖ EPA addressed several comments and concerns by suggesting the adoption of site-specific criteria
 - e.g., Recommends site-specific standards for non-human sources
 - Practical?



Potential Impacts to Utah

EPA 2012 Recreational Criteria

1. **Criteria based on 32 or 36 illnesses per thousand?**
2. **EPA 2012 STV = 710, Utah's max 709**
3. **DWQ Table 2.14.1 footnote 7:** Where the criteria are exceeded and there is a reasonable basis for concluding that the indicator bacteria *E. coli* are primarily from natural sources (wildlife), e.g., in National Wildlife Refuges and State Waterfowl Management Areas, the criteria may be considered attained provided the density attributable to non-wildlife sources is less than the criteria. Exceedences of *E. coli* from nonhuman nonpoint sources will generally be addressed through appropriate Federal, State, and local nonpoint source programs.



Discussion

